

## Sipura SPA-2000 Manual Configuration Instructions



Only settings that deviate from factory defaults are included in this document. If your ATA was previously connected to a different service, you will need to use the screenshots to verify that all settings are correct; alternatively, you may reset the ATA to factory defaults (recommended), as described in section 4.

### 1. Plug in the ATA

Connect a telephone handset, network, and power to the ATA, and wait briefly while it discovers its IP address via DHCP. For more information on connecting your ATA, or to set a Static IP Address manually, please consult your User Manual.

### 2. Determine the ATA's IP Address

To find out the ATA's IP Address, dial "\*\*\*\*", then "110#". Note down the IP Address spoken out and enter it into the address bar of a Web browser.

**Example:** If the address is "10.34.238.6", enter this as "<http://10.24.238.6/>".

If the address read out is "0.0.0.0", the ATA was unsuccessful in acquiring an IP address via DHCP -- contact your network administrator before proceeding.

### 3. Reset the ATA to Factory Defaults (optional).

**Note:** This will clear all custom settings from the ATA; if you wish to retain these for later reference, please make a note of them (for example, by printing the configuration pages, or saving a copy of them to disk).

To perform the reset, dial "\*\*\*\*" on the attached telephone handset, followed by "73738#", then "1" to confirm; then hang up. Once the phone is hung up, the ATA will restart with its settings reset to factory defaults.

#### 4. Configure the ATA via its web interface

Bring up the ATA's Web configuration page, as described in section 2 of this document. Click on "Admin Login", then "advanced". Clicking on each of the System, SIP, Regional, Line 1 and (optionally) Line 2 tabs in turn, make the following changes; click on the "Submit All Changes" button when done with each page:

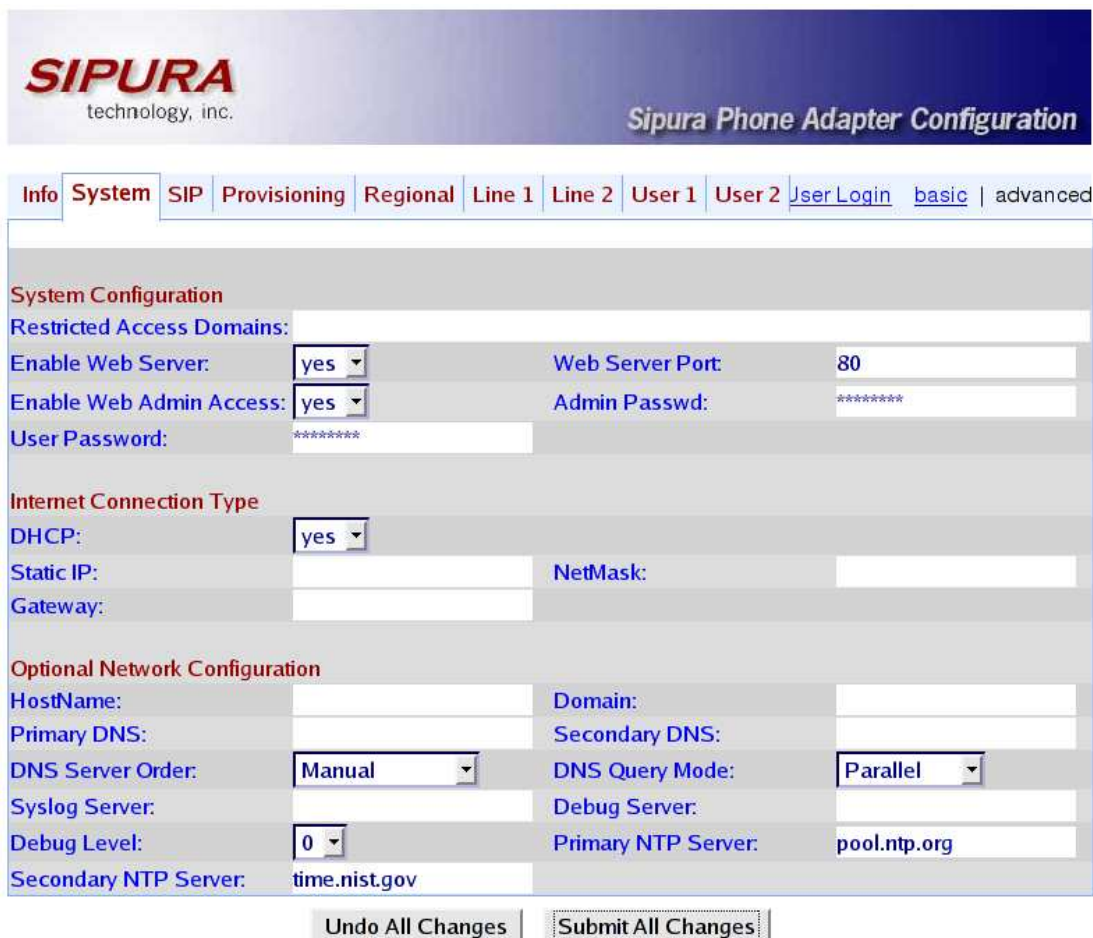
##### System

###### System Configuration

**Admin Passwd:** <choose a secure password for administration>  
**User Password:** <may be the same as the Admin Passwd>

###### Optional Network Configuration

**Primary NTP Server:** pool.ntp.org  
**Secondary NTP Server:** time.nist.gov



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Info System SIP Provisioning Regional Line 1 Line 2 User 1 User 2 User Login basic advanced

**System Configuration**

Restricted Access Domains:

Enable Web Server:  Web Server Port:

Enable Web Admin Access:  Admin Passwd:

User Password:

**Internet Connection Type**

DHCP:

Static IP:  NetMask:

Gateway:

**Optional Network Configuration**

HostName:  Domain:

Primary DNS:  Secondary DNS:

DNS Server Order:  DNS Query Mode:

Syslog Server:  Debug Server:

Debug Level:  Primary NTP Server:

Secondary NTP Server:

## SIP

### NAT Support Parameters

**Handle VIA received:** yes  
**Handle VIA rport:** yes  
**Insert VIA received:** yes  
**Insert VIA rport:** yes  
**STUN Enable:** yes  
**STUN Server:** stun.freshtel.net

NAT Support Parameters			
Handle VIA received:	<input type="text" value="yes"/>	Handle VIA rport:	<input type="text" value="yes"/>
Insert VIA received:	<input type="text" value="yes"/>	Insert VIA rport:	<input type="text" value="yes"/>
Substitute VIA Addr:	<input type="text" value="no"/>	Send Resp To Src Port:	<input type="text" value="no"/>
STUN Enable:	<input type="text" value="yes"/>	STUN Test Enable:	<input type="text" value="no"/>
STUN Server:	stun.freshtel.net	EXT IP:	
EXT RTP Port Min:		NAT Keep Alive Intvl:	15

## Regional (Australia only)

### Call Progress Tones

**Dial Tone:** 400@-19,425@-19;30(\*0/1+2)  
**Busy Tone:** [425@-10;10\(.4/4/1\)](#)  
**Reorder Tone:** [425@-10;10\(.2/2/1\)](#)  
**Ring Back Tone:** [400@-19,425@-19,450@-19;\\*\(.4/2/1+2+3,.4/2/1+2+3,0/2/0\)](#)

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Info
System
SIP
Provisioning
Regional
Line 1
Line 2
User 1
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User Login
basic
advanced

Call Progress Tones	
Dial Tone:	400@-19,425@-19;30(*0/1+2)
Second Dial Tone:	420@-19,520@-19;10(*0/1+2)
Outside Dial Tone:	420@-16;10(*0/1)
Prompt Tone:	520@-19,620@-19;10(*0/1+2)
Busy Tone:	425@-10;10(.4/4/1)
Reorder Tone:	425@-10;10(.2/2/1)
Off Hook Warning Tone:	480@-10,620@0;10(.125/125/1+2)
Ring Back Tone:	400@-19,425@-19,450@-19;*(.4/2/1+2+3,.4/2/1+2+3,0/2/0)
Confirm Tone:	600@-16;1(.25/25/1)
SIT1 Tone:	985@-16,1428@-16,1777@-16;20(.380/0/1,.380/0/2,.380/0/3,0/4/0)
SIT2 Tone:	914@-16,1371@-16,1777@-16;20(.274/0/1,.274/0/2,.380/0/3,0/4/0)
SIT3 Tone:	914@-16,1371@-16,1777@-16;20(.380/0/1,.380/0/2,.380/0/3,0/4/0)
SIT4 Tone:	985@-16,1371@-16,1777@-16;20(.380/0/1,.274/0/2,.380/0/3,0/4/0)
MWI Dial Tone:	350@-19,440@-19;2(.1/1/1+2);10(*0/1+2)
Cfwd Dial Tone:	350@-19,440@-19;2(.2/2/1+2);10(*0/1+2)
Holding Tone:	600@-19;*(.1/1/1,.1/1/1,.1/9.5/1)
Conference Tone:	350@-19;20(.1/1/1,.1/9.7/1)
Secure Call Indication Tone:	397@-19,507@-19;15(0/2/0,.2/1/1,.1/2.1/2)

### Distinctive Ring Patterns

Ring 1 Cadence: 60(1.5/3.4)

Ring 3 Cadence: 60(1.5/3.4,.4/.2,.4/2)

(Note: the above must appear all as one line in the ATA config. You should **copy and paste** this line rather than trying to type it in.)

### Distinctive Call Waiting Tone Patterns

CWT8 Cadence: 30(.2/.2,.2/4.4)

### Control Timer Values (sec)

Hook Flash Timer Min: 0.07

Hook Flash Timer Max: 0.13

<b>Distinctive Ring Patterns</b>			
Ring1 Cadence:	60(1.5/3.4)	Ring2 Cadence:	60(.3/.2,1/.2,.3/4)
Ring3 Cadence:	60(1.5/3.4,.4/.2,.4/2,.4/2,	Ring4 Cadence:	60(.4/.2,.3/2,.8/4)
Ring5 Cadence:	60(.2/.2,.2/2,.2/2,1/4)	Ring6 Cadence:	60(.2/.4,.2/4,.2/4)
Ring7 Cadence:	60(.4/.2,.4/2,.4/4)	Ring8 Cadence:	60(0.25/9.75)
<b>Distinctive Call Waiting Tone Patterns</b>			
CWT1 Cadence:	30(.3/9.7)	CWT2 Cadence:	30(.1/.1,.1/9.7)
CWT3 Cadence:	30(.1/.1,.3/1,.1/9.3)	CWT4 Cadence:	30(.1/.1,.1/1,.1/9.5)
CWT5 Cadence:	30(.3/1,.1/1,.3/9.1)	CWT6 Cadence:	30(.1/.1,.3/2,.3/9.1)
CWT7 Cadence:	30(.3/1,.3/1,.1/9.1)	CWT8 Cadence:	30(.2/.2,.2/4.4)
<b>Distinctive Ring/CWT Pattern Names</b>			
Ring1 Name:	Bellcore-r1	Ring2 Name:	Bellcore-r2
Ring3 Name:	Bellcore-r3	Ring4 Name:	Bellcore-r4
Ring5 Name:	Bellcore-r5	Ring6 Name:	Bellcore-r6
Ring7 Name:	Bellcore-r7	Ring8 Name:	Bellcore-r8
<b>Ring and Call Waiting Tone Spec</b>			
Ring Waveform:	<input type="text" value="Sinusoid"/>	Ring Frequency:	25
Ring Voltage:	70	CWT Frequency:	440@-10
<b>Control Timer Values (sec)</b>			
Hook Flash Timer Min:	.07	Hook Flash Timer Max:	.13
Callee On Hook Delay:	0	Reorder Delay:	5
Call Back Expires:	1800	Call Back Retry Intvl:	30
Call Back Delay:	.5	VMWI Refresh Intvl:	30
Interdigit Long Timer:	10	Interdigit Short Timer:	3
CPC Delay:	2	CPC Duration:	0

**Regional (all countries)**

**Miscellaneous**

**Time Zone:**

GMT+10:00 <or as appropriate>

**FXS Port Impedance:**

600	<North America>
270+750  150nF	<most of Europe>
220+820  120nF	<Australia, New Zealand>
220+820  115nF	<Austria, Bulgaria, Germany, Slovakia, South Africa>
370+620  310nF	<UK, India>

Miscellaneous			
Set Local Date (mm/dd):		Set Local Time (HH/mm):	
Time Zone:	GMT+10:00	FXS Port Impedance:	220+820  120nF
FXS Port Input Gain:	-3	FXS Port Output Gain:	-3
DTMF Playback Level:	-16	DTMF Playback Length:	.1
Detect ABCD:	yes	Playback ABCD:	yes
Caller ID Method:	Bellcore(N.Amer,China)	FXS Port Power Limit:	3

Undo All Changes

Submit All Changes

**Line 1 (and 2, if using a different Firefly number on the second line)**

**NAT Mapping Enable:** yes  
**NAT Keep Alive Enable:** yes  
**NAT Keep Alive Msg:**

**Proxy and Registration**

**Proxy:** sip.freshtel.net  
**Make Call Without Reg:** yes  
**Ans Call Without Reg:** yes

**Subscriber Information**

**Display Name:** <your full name>  
**User ID:** <your Firefly number>  
**Password:** <your Firefly password>



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Info System SIP Provisioning Regional **Line 1** Line 2 User 1 User 2 User Login basic | advanced

Line Enable:  SAS Enable:   
MOH Server:  SAS DLG Refresh Intvl:   
NAT Mapping Enable:  SAS Inbound RTP Sink:   
SIP Port:  NAT Keep Alive Enable:   
EXT SIP Port:  NAT Keep Alive Msg:   
SIP TOS/DiffServ Value:  NAT Keep Alive Dest:   
RTP TOS/DiffServ Value:  SIP Debug Option:   
Network Jitter Level:  SIP 100REL Enable:   
Blind Attn-Xfer Enable:  SIP Proxy-Require:   
Auth Resync-Reboot:  SIP Remote-Party-ID:

**Proxy and Registration**

Proxy:  Use Outbound Proxy:   
Outbound Proxy:  Use OB Proxy In Dialog:   
Register:  Make Call Without Reg:   
Register Expires:  Ans Call Without Reg:   
Use DNS SRV:  DNS SRV Auto Prefix:   
Proxy Fallback Intvl:

**Subscriber Information**

Display Name:  User ID:   
Password:  Use Auth ID:   
Auth ID:   
Mini Certificate:   
SRTP Private Key:

### Audio Configuration

Preferred Codec: G729a

**NOTE:** It is vital that the dial plans are entered correctly – as there is not enough space on a page to show them as one line, you should **copy and paste** one of the below dial plans to ensure it is correct. Missing a space or getting a character wrong will stop them from working.

#### Dial Plan (Australia only -- user has no local dialing prefix set)

```
(*123|*xxxxxxx|<000:61000> S0|<112:61112> S0|<106:61106> S0|61000 S0|61112
S0|61106 S0|0[2378][2-
6]xxxxxx|0[4569]xxxxxx|611300xxxx|611800xxxx|6113xxxx|6118xxxx|[1-9]x.)
```

#### Dial Plan (Australia only -- user has local dialing prefix set)

```
(*123|*xxxxxxx|000 S0|112 S0|106 S0|001[0-9]x.|0[4569]xxxxxx|0[2378][2-9]xxxxxx|[2-
9]xxxxxx|1300xxxx|1800xxxx|13xxxx|18xxxx|1[4-79]x.)
```

Audio Configuration			
Preferred Codec:	G729a	Silence Supp Enable:	no
Use Pref Codec Only:	no	Echo Canc Enable:	yes
G729a Enable:	yes	Echo Canc Adapt Enable:	yes
G723 Enable:	yes	Echo Supp Enable:	yes
G726-16 Enable:	yes	FAX CED Detect Enable:	yes
G726-24 Enable:	yes	FAX CNG Detect Enable:	yes
G726-32 Enable:	yes	FAX Passthru Codec:	G711u
G726-40 Enable:	yes	FAX Codec Symmetric:	yes
DTMF Tx Method:	Auto	FAX Passthru Method:	NSE
Hook Flash Tx Method:	None	FAX Process NSE:	yes
Release Unused Codec:	yes		
Dial Plan			
Dial Plan:	(*123 *xxxxxxx 000 S0 112 S0 106 S0 001[0-9]x. 0[4569]xxxxxx 0[2378][2-9]x.)		
Enable IP Dialing:	no		
FXS Port Polarity Configuration			
Idle Polarity:	Forward	Caller Conn Polarity:	Forward
Callee Conn Polarity:	Forward		

Undo All Changes

Submit All Changes

#### Dial Plan (UK only -- user has no local dialing prefix set)

```
(*123|*xxxxxxx|<999:44999> S0|<112:44999> S0|44999 S0|44112 S0|4418000
S0|4418001999 S0|440800112999 S0|0[2-9]xxxxxx|[1-9]x.)
```

**Dial Plan (UK only -- user has local dialing prefix set)**

(\*123|\*xxxxxxxx|999 S0|112 S0|18000 S0|18001999 S0|0800112999 S0|[2-9]xxxxxxxx|[2-9]xxxxxxxx|[2-9]xxxxx|[2-9]xxxxx|0[1237]xxxxxxxx|01xxxxxxxx|0[045689]x.l1x.)

**Dial Plan (US and Canada)** <no change>

Once these changes are made and the "Submit All Changes" button is clicked, your ATA will reboot, and you should be ready to place and receive calls with Freshtel.

**Dialling:**

To dial a Firefly number or voicemail, prefix the number with a star, e.g. **\*80001234**, **\*123**.

If you have configured a local dialling prefix for your account via the [Freshtel website](#), you can dial local, national, mobile, and international PSTN numbers exactly as you would from a land line phone in your area; e.g. **08007654321** (US), **9557745** (US – local), **0061399156415** (UK – international), **99156415** (Australia – local).

If you have not configured a local dialling prefix, numbers are dialled in full (including country code but without any international dial prefix), e.g. **61399156415**, **18007654321**. Land lines and mobiles in Australia can be dialled with an initial **0**, e.g. **0399156415**.